



SEQUENCE LISTING<110> BASS, James JEANPLONG, Perenc KAM
 BADUR, Ravi SHARMA, Mridula<120> NOVEL PROMOTER SEQUENCES OF
 MYOSTATIN GENE<130> 30824/14

<140> United States of America Serial No. 09/743,312
 <141> 1999-07-07<150> PCT/NZ99/00107<151> 1999-07-07<160> 2
 <170> PatentIn version 3.0<210> 1<211> 10492<212> DNA<213> Bo
 vine<220><221> promoter<222> (1)..(10402)<220><221> enhancer<222>
 > (6728)..(6734)<220><221> enhancer<222> (7874)..(7880)<220><221>
 > misc_signal<222> (9819)..(9832)<220><221> TATA_signal<222> (9
 457)..(9463)<220><221> enhancer<222> (9860)..(9866)<220><221> en
 hancer<222> (10095)..(10101)<220><221> CAAT_signal<222> (10197).
 .(10202)<220><221> TATA_signal<222> (10240)..(10247)<220><221> T
 ATA_signal<222> (10264)..(10271)<220><221> CDS<222> (10403)..(10
 492)<400> 1
 gaattcttct atggctatca ccatgtccaa aacactacct gagtaaagaa ggagtcattt
 60

tttttttaag ggtttaaaaa atttaaaaat ttttaaatta aatttaaaat tgaaatctaa
 120

aaaaatttta agaaaaattt tttttaatct gcagaaacat actctgtatt gagtctatgg
 180

ttaccaaaga tccccccaga acaaaacccc agaattgca agattttctc ttgggaagtg
 240

ttgttttact ggaaggctta ttaactcaat aataagggag agtaaagact tcaaaactaa
 300

agatctgttt ttgtcagttc aatctatatt gtcactgtct ctggaaaccc tgagcttggt
 360

ctaaagtaaa ctgaactatc atgaagaaaa tcagccatca aaatagtga aacgaacctc
 420

ttacactcag ttttttctca tttgtaaatt taaaaaattt aacttcatta agtctgggga
 480

ccaatgtata gctgcaagca ggaattttat gccttcttaa tccagagagg tgggcaatgg
 540

tgtgggttta gaccagaagt aaggatgtgg gtgcagcaaa tatgacagcc caactgctgc
 600

tgctgctgct aagtcacttc agtcgtgtcc gactctgtgt gacccagag acggcagccc
 660

accaggctcc cccgtccctg ggattctcca ggcaagaaca ctggagtggg ttgccatttc

720

cttctccaat gcatgaaagt gaaaagtgaa agtgaagtcg ctcagtcgtg tccgaccctc
780

agtgacccca tggactgcag cctaccaggc ttctccgtcc atgggatttt ccaggcaaga
840

gtactggagt ggggtgccat tgccttctcc atgacagccc aactagagac tgctataact
900

tatatcagag aatctgaaac tccctacagg ctatcttgct atatgtgcat tcaacatgaa
960

caaaaagaaa attcaagtcc agtaaaaagg gctaaaatag tgaatcacag acttttgcca
1020

aacaacagtc aatgatttgg gcaaaggact taagtagcta tgcttatttg ctattagtag
1080

aataaagaaa tgtttgagcc tggttctcaa tgcttgaata ataagattcc ttttcaagga
1140

aaaacaattt ttttgagaac tcatagataa aagtcaaate tatcacttta gatgtcactt
1200

gaagccaact tgattatagt aaacaaattc agctgtaaac atttttttat aacactgtag
1260

acactgtatt tttatacact gtataaatga agacactgaa gatgtaaagt ggtgacctgg
1320

atgatccaga atatgcaata tgcaccaaaa actaagtttt ttaaatagata caaatgaact
1380

tacttacaaa agggaaatag agtcacagat gtagaaaaca tacagttacc tagggggacg
1440

gggggagggg aaactgggag ataggaattg acacatacac tctactatat atacactagg
1500

taactaatat gaacctactg tatagcgcac agaactctac ccaatactct gtaatgacat
1560

ttatgggaat agaatecaaa aagagcagat atgtgtatat gtataaactg attcacaccc
1620

cttgccctgc ctaaacacac acagacacac acagacacat ccattttgag atttctttcc

1680

tcctctttgg ctacttttga ctcagtttga cctagatagg acctgtgctg ggtaagggct
1740

ttggcagtct taagtagtgt cagagcaagc acagtcactc cctagcaagg tcttattact
1800

agctacagag tctctctgtg cagtcataga tctactgagtg caaaagtcca gtgcaatggt
1860

tgagtcccat gcatgctctc acagaactga gagaggaggc aaggacacag gaccctccag
1920

tgctgggact ctctactggg gtgagcaaga gggaacccaa tagaaatgct gcgaaccaca
1980

gagccactca gaaagcctgt aaatataaac ataacaacac attatgaata tataagtata
2040

agtataccta ccaaaaaatc agaaagttga acttttttgt attcaaggga acagtcattc
2100

atttatcggt tcagttatca gtaaacacat ttgggaactg taaaaatcta atcagttcag
2160

ttcagttcag tcgctcagtc gtgtctcttt gcgactccat gaatcgcagc acgccaggcc
2220

tcctgtcta tcaccaactc ccggcgttca ctcagactta cgtccatcga gtcagtgatg
2280

ccatccagcc atctcatcct ctgtcgtccc cttctcctcc tgcccccaat cctcccagc
2340

atcagagtct tttccaatga gtcaactctt ctcacgaggt ggccaaagta ccaagtcttt
2400

gagtctagtc tcttttttca atggagaaga agaggaaacc aaattataac ttaattttta
2460

ttctttgtat tacaagtgta taattaatac actggagttt ccatttcaga aaggaagaag
2520

agaaatcaca ttttgcagct ttcttgaact aatacaaaga aatgcagaag ttttgtaa
2580

tgggatatta ttatgacacg ttgccataat atgaatgtca tcatctcaag actgacctga

2640

aaaccaaatt aaaaaaaaaa agagagagag agagagagag agagaaaaaa aagaaaaccc
2700

tccagaccag atttcagtct accacttgag ctgacaaaca ttggccaaat gtcctctaca
2760

gaacctgtaa gttagtagtt ggtaattata aaacaataaa gtatatattt ctgctcctgg
2820

caataattat gtatcagtta aaaagtatac attgtctaaa aatcaccat attgatgtc
2880

tcattaaaac aaagttacaa atattaagat gagaggactt aaagttagat gggaaaatat
2940

tcaattgaag cagtataaaa tgcattactc tggggcaaag tgtgggtctgg agatccctgg
3000

agtgaagacc cttttagaca atctgtggag taagaactgt tttcataaca aagctaagat
3060

ttccttgcta ttctcatttt ctcttacgta tatagtcgag tttccagaa gttccatggt
3120

atgtaacatc atcattactc tgtcagcaaa tagaatacat gtttgcatat gtctatatcc
3180

taacattttct catttttaat ttataattca ttaaattattg atagatatga cccacataaa
3240

caaaagcttt tcaggatcct gaataacttt tcagagtaaa ggaatcttga gaccaaagg
3300

tttgagaatt actgttttag gggatacacc tcaagtgaag gagcacgcct catcacattt
3360

ccactctata tggaagaatc tagaagattg aacctataat tgaagagtgc aggctttatg
3420

aagacagtga ctgtttctgt ctgctttctc ctgagaattt agcatgatgc caggcacata
3480

atttgttggt gttcagctgc taagtcattt ctgacttttt gcaaccccat gaactgcatg
3540

caacatgccg ggtttctctg ctttcactat ctctggagtt ttgctccaac tcatgtccat

3600

tgagtcactg ataccatcca acgatctcat cctctataag acacattata gacattagaa
3660

tattttcata aaataataag tgaattaata cagctgaaac tcaaacagca taggggttac
3720

aagtaccaac tcgcgcccaa gttgaaaatc cacatataat cttaagggtca gccttggata
3780

catgcatatc caagggtccc catctgagga ttcaaccaac ctcagatagt gtagtactgc
3840

agtacacatt tagtgaaaaa tgtgcatata agtggaccca tgcagggtcaa acctgcgttt
3900

tccaagggtc cacagtagac acacacatgc atacatgcat ctctaaatga aagctttgcc
3960

atctgactta ctcaagggtca cataaaacgt cagcgagaaa cccagaacta tattccagat
4020

ctctgttcct atactgttac tccctgagtc aagggtactt ttgtttttgt tcatttttat
4080

tctgtaatct attgagatca cagataatca gatgttgcca ctgtaggatg gcagcctctc
4140

atgctgttat gtgaattgag cactatccag tttgtttctg gctttaagtg taatcagaac
4200

agtgttatat caaagggtta tcatcacaag gaaatggcaa gagtgatcag ataaaatgca
4260

tctttctctc ttttcccaca acagactcga atttttcatg attcatcctt attctaattc
4320

ttcagttcag ttcagttcag tccttcagtc atgtccaact ctttgccacc ccatgaatct
4380

cagcaagcca ggctccctg gtccatcacc aactcccaga gttcaccag actcacgtcc
4440

atcgagtcag tgatgccatc tagccatctc atcctctgtc gtccccttct cttcctgccc
4500

ccaatccctc ccagcatcag agtcctttcc aatgagtcaa cttttcacat gaggtggcca

4560

aagtactgga gtttcagctt tagcatcatt ccttccaaag aaatcccagg gctgatctcc
4620

ttcagaatgg actggttgga tctccttgca gtccaaggga ctctcaagag tcttctccaa
4680

caccacagtt caaaagcatc aattcttcgg cgctcagctt tcttcacagt ccaactctca
4740

catccataca tgaccacagg aaaaaccata gccttgacta gatggacctt tgttggcaaa
4800

gtaatgtctc tgcttttcaa tatgctatct aggttgggtca taactttcct tccaaggagt
4860

aagcatcttt taatttcatg gctgcagtca ccatttgtag tgattttgga gccagaaaa
4920

ataaagtctt gacactgttt ccaactgtttc cccatcttat ttcccatgca gtgatgggac
4980

cggatgccat gatcttagtt ttctgaatgt tgagctttaa gccaaacttt tcaatctcct
5040

ctttcacttt catcaagagg cttttgagtt cctcttcact ttctgccata aggggtggtgt
5100

catctgcata tctgagggtta ttaatatattc tcccggcaat cttgattcca gcttggtgctt
5160

cttccagccc agtgtttctc atgatgtact ctgcatagaa gttaaataag caggggtgaca
5220

atatacagtc ttgacatcct ccttttcccta tttggaacca gtctggtggt ccattgtccag
5280

ttctaactgt tgcttcctga cctgcataca ggtttctcaa gaggcaggtc aggtggcagg
5340

tcagggtggtc aggaacatct ctttcagaat ttttgacagt ttattgtgat ccacacagtc
5400

aaaggctttg gcatagtcaa taaagcagaa atagatgttt ttctggaact ctcttgcttt
5460

ttcgatgatc cagcagatgt tggcaatttg atctctggtt cctctgcctt ttctaaaacc

5520

agcttgaaca tcaggaagtt catgggtcac gtattgctga agcctggctt ggagaattta
5580

gagcattact ttactagcat tactttttcac aataaactgt ggaaaattct gaaagagatg
5640

ggcataccag accaccggat ctgcctcttg agaaatttgc atgcaggcca ggaagcaaca
5700

attagaagtg gacatggaac aacagactgg ttccaaatag gaaaagggtg tcgtcaaggc
5760

tgtatattgt caccctgttt atttaacttc tatgcagagt acatcatgag aaacgctggg
5820

ctggaagaag cacaagctgg aatcaagatt tccggggagaa atatcaataa cctcagatat
5880

gcagatgaca ccacccttat ggcagaaagt gcagaggaac taaaaagccc cttgatgaaa
5940

gtgaaagtgg agagtgaaaa agttggctta aatctcaaca ttcagaaaac gaagatcatg
6000

gcatccggtc ccatcacttc atgggaaata gatggggaaa cagtggaaac agtgtcagac
6060

tttatTTTTTc tgggctccaa aatcactaca aatgggtgact gcagccatga aattaaaaga
6120

tgcttactcc ttggaaggaa agttatgacc aacctagata gcatattgaa aagcagagac
6180

attactttgc taacaaaggc ccatctagtc aaggctatgg tttttcctgt ggtcatgtat
6240

ggatgtgaga gttggactgt gaagaaagct gaggccgaa gaattgatgc ttttgaactg
6300

tggtgttgga gaagactctt gagagtcctt tggactgcaa ggagatccaa ccagtccatt
6360

ctgaaggaga tcagccctgg gatttctttg gaaggaatga tgctaaagct gaaactccag
6420

tactttggcc acctcatgtg aagagctgac tcattggaaa agactctgat gctgggaggg

6480

attgggggca ggaggagaag ggggcgacag aggatgagat ggctggatgg catcactgac
6540

tcaatggacg tgagtctgtg tgaactctgg gagttggtga tggacaggga ggcttggcgt
6600

gctttgattc atgggggtcac aaagagtcgg acacgactga gcgactgac tgtctctctc
6660

ttactagcat gtgtctcttc ctttttttgc cacatcatca aactcctggc aaacttcaca
6720

ttaataacat ttgggagctt ccagaatgca aacagtgaac ccattaatgt tttttgggaa
6780

atatgcttta tactctcaat gttgttttga aacgcacacc cctcccttg ccgctggtg
6840

tttgaagac agttgagaga agtttgcttg ctaccttact tatgggttaca caaacgtaag
6900

gccccctgag tacaagaag aacaggggga acgcaactt caggccctgt gaggaggggc
6960

actggactcc tgtgagaaga aactgctttc aaagaattcc tgggagaaat tctctatgca
7020

ctcatcctag caacaaagtc ctgtccgaag ttaggcccgc agcaccacaca cggcagtga
7080

ggttcctact gctgggtgaac cttgctgctc cgaagccata ggaagggtgc aaatcccggc
7140

actggagaag gaaaacacgt tcttgaaatt tcttgagtac ctcttaattc attcaatgct
7200

gacctccgga gattggatag agctgactct cattattcac agtggttatg ttctacccaa
7260

tactgccaa catgaataag tgattcctga accactgccc ctaggggaac tacaaggtta
7320

gattcccgtc agcctctggg cacgtttttg ttaaccaatc aataaataac cttgttttgt
7380

gtgcatttct gttttaaaat atctttattt aatacgtact gctaattctt caacatttgg

7440

ttcacaaacca aaaggcccta ttaactggaa gccctgaatg aagcttacat aacacacatt
7500

gtttttctat gaggaaaaat ttttccttca gtcctgccac agccttcttg cttaaaattg
7560

tggacaaaat atacataaca tgaaactgac tattatttaa ctgattttaa ctgtacagtt
7620

cagtggcatt aagtacactt accttgctgt ggaactatga tcaacattca tctctagaac
7680

tttttgatct tctcgaattg aaaactctgc atctattgca cagtagcttt ccccatcac
7740

accgcaccct tcctccagcc ccccggcacc accatccttc tttccatgac agtcacctg
7800

tgcttaggaa cacagccctt caacactacg cttggggggc actgtaagca acaggatcac
7860

tcctaccgc caccaaatgc acacaaaaat ataaaaagca tgggtggcata tcgattgcaa
7920

aaagggtgct tgctaagtat gagggctgaa acaaggcaga gaattgacta ggttgacctc
7980

agctgggatc ctgtgtgttg gaagcctcaa attttccatt gttctgtgca tacgcacaaa
8040

tgcttataaa agcactgtaa ggattgatta tgaagttaag ataatctca gcaagacata
8100

aatgtgcaag cacgggatcc atgaataacg agcactgacc atgtggaaat gataatcttt
8160

gtttccttta ttccaggcag taaggagaaa gcgctcacag ggctgcctta caccatttta
8220

ctagagagct agcctatgtc agtcggtagc tggcaattac aaactgaagc agttctagtt
8280

catgtggagg atgaatttaa ccataatctc aacccctct gcatgaaaca gagactaagt
8340

actcaagtac cagttatcag tcacttacta tatgacaggc actgtactca acaatttaca

8400

tgtattattg aattacatgc cccaacact ctatgaggaa gctgaagggt agagaagtat
8460

ctcattcatt attacacagt ggcaaaactga gatctgaact caggtctatc caactccagg
8520

acctgagatc ccaattgcta cacaattcta atcaagttaa aagggaataa ggatttgatt
8580

tgctcagaag tgtatagggg catatgttac aattataaca ttacaaagat ttatatgttg
8640

aaaaataaat ttatcaaaca aataaaactt tataagcctg atctaatact gctccgcaac
8700

aaagactatc tgaaatcctt cagggcatct ggtttgtgtc tggttttcct taatctttaa
8760

tgatgggcaa atctaatagca ttatgtaagg ccattttttc tcaagagatg tagatacctc
8820

ttaagaattt gatgaaaatg cattaacttt tcaggctact gagttgcatt ttagtgcact
8880

gaggcagtaa attagtgtac aatgtgcgaa agtagtgacc taaaaaataa atatttgata
8940

tgaaccactg cactctcttg gggaaaaaag taatggatta actctcttag gagtccttag
9000

cttccccaaa agtagtagga aaaataaatc tcctgtggcc tggaaacagc ttctgtttct
9060

tgctggctat atttgttttag gtttttaata gttcatttga ttagaccttg tggtcccaa
9120

agctaagggt gagagtttga tccctacaga ggccacttca atttagagaa caaaaagccc
9180

cattctctgc tcccagacct taccctaaat ccctgccagg tgtctgccct ccggtcaaat
9240

gagaaactgg caaaggaagt actaggaggt cgcacagtac taggaagtag aaaaatggac
9300

tagcacacta ctgagaagca gaaaaatggg cacccttcat gatggtgttc ctttccctt

9360

ctgtgttcac aatgctccga tataatttac agagggtaga taactacatt tttttctttt
9420

accactggaa ggctgaggaa aactttgtta cccatcataa aattcactat cttctaagtc
9480

attctatggtt attctaagat caaatagctg acaatatacct ctttgtaata aacaatgaaa
9540

aaacacatcc tctgagcaat attaattctgc aacttttagga taggaagtaa cttataacta
9600

gtcaattgaa actgaaatac aattttcata tgaataaaaag atattattta aaagtaattc
9660

catgagcaat ttaatatata agtaggattt tcattatgtg ttaagaattt attcagggaa
9720

acaagtttct caaattatag cagaaaatct tttactagta tcacagtctt ttcatttaag
9780

tcttcttgaa taaatctgta ttttctaatt atacaagact aaaaataatt taatataaca
9840

aataaaaatta tttttacttc aaatgcttac ttaaatagta taaaatcatt ttattttctg
9900

agggaaaagc atatcaactt ttttaagtatg aagtgtaaat taagatttat tcacttaaatt
9960

tataattttt aaagtttcac atataaagat gaataagatc taagtgtata tgttattggt
10020

aataaagttt ttaatttttc gcatgtcaca tacagccttt attattcata gatttattcc
10080

ttttaagaag tagtcaaag aatcagctca cccttgactg taacaaaata ctgtttgggtg
10140

acttgtgaca gacagggttt taacctctga cagcgagatt cattgtggag caagagccaa
10200

tcacagatcc cgacgacact tgtctcatca aagttggaat ataaaaagcc acttggaata
10260

cagtataaaa gattcactgg tgtggcaagt tgtctctcag actgggcagg cattaacggt

10320

tggcttggcg ttactcaaaa gcaaaagaaa agtaaaagga agaagtaaga acaagggaaa
10380

agattgtatt gattttaaaa cc atg caa aaa ctg caa atc tct gtt tat att
10432

Met Gln Lys Leu Gln Ile Ser Val Tyr Ile

1

5

10

tac cta ttt atg ctg att gtt gct ggc cca gtg gat ctg aat gag aac
10480

Tyr Leu Phe Met Leu Ile Val Ala Gly Pro Val Asp Leu Asn Glu Asn

15

20

25

agc gag cag aag

10492

Ser Glu Gln Lys

30

<210> 2<211> 30<212> PRT<213> Bovine<400> 2

Met Gln Lys Leu Gln Ile Ser Val Tyr Ile Tyr Leu Phe Met Leu Ile

1

5

10

15

Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys

20

25

30